

CLAIMS

What is claimed is:

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- 1 1. A method for determining a position of a mobile satellite positioning system
2 (SPS) receiver which is coupled to a communication receiver, said method
3 comprising:
4 determining a change in a communication signal received by said
5 communication receiver;
6 determining a parameter, based on said change, and processing SPS signals in
7 said SPS receiver in a manner specified by said parameter.
- 1 2. A method as in claim 1 wherein said communication signal is a cellular signal
2 transmitted from a wireless cell site.
- 1 3. A method as in claim 2 wherein said cellular signal uses a code-division
2 multiple access (CDMA) technique to distinguish between different communication
3 receivers.
- 1 4. A method as in claim 2 wherein said cellular signal uses a time-division
2 multiple access (TDMA) technique to distinguish between different communication
3 receivers.

1 5. A method as in claim 2 wherein said change is a change in signal level as said
2 mobile SPS receiver and said communication receiver together move and wherein said
3 parameter is a motion information of said communication receiver.

1 6. A method as in claim 5 wherein said motion information determines a search
2 range for acquiring SPS signals from at least one SPS satellite.

1 7. A method as in claim 6 wherein when said motion information specifies a first
2 velocity, said search range is a first range and when said motion information specifies
3 a second velocity, said search range is a second range.

1 8. A method as in claim 7 wherein said first velocity is less than said second
2 velocity and said first range is smaller in frequency than said second range.

1 9. A method as in claim 5 wherein said SPS receiver determines at least one
2 pseudorange to at least one SPS satellite in view of said SPS receiver.

1 10. A method as in claim 9 wherein said parameter is used in determining said
2 pseudorange, and said change is a fading of said signal level.

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A' 1 ~~11.~~ A mobile communication system comprising:
2 a satellite positioning system (SPS) receiver which receives and processes
3 SPS signals from SPS satellites;

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4 a communication receiver which receives a communication signal;
5 a communication signal measurement (CSM) unit coupled to said
6 communication receiver and coupled to said SPS receiver, said CSM
7 unit determining a change in said communication signal which
8 specifies a manner for processing said SPS signals.

1 13. A mobile communication system as in claim 12 wherein said communication
2 signal is a cellular signal transmitted from a wireless cell site.

1 14. A mobile communication system as in claim 13 wherein said cellular signal
2 uses one of (a) a code division multiple access (CDMA) or (b) a time division multiple
3 access (TDMA) technique to distinguish between different communication receivers.

1 15. A mobile communication system as in claim 12 wherein said change is a
2 change in signal level as said mobile communication system moves and wherein said
3 parameter is a motion information of said mobile communication system.

1 16. A mobile communication system as in claim 15 wherein said motion
2 information determines a search range for acquiring SPS signals from at least one SPS
3 satellite.

1 17. A mobile communication system as in claim 16 wherein when said motion
2 information specifies a first velocity, said search range is a first range, and when said
3 motion information specifies a second velocity, said search range is a second range.

1 18. A mobile communication system as in claim 17 wherein said first velocity is
2 less than said second velocity and said first range is smaller in frequency than said
3 second range.

1 19. A mobile communication system as in claim 15 wherein said SPS receiver
2 determines at least one pseudorange to at least one SPS satellite in view of said SPS
3 receiver.

1 20. A mobile communication system as in claim 19 wherein said parameter is used
2 in determining said pseudorange and said change is a fading of said signal level.

Sub 1 21. A method for determining a position of a mobile satellite positioning system
AI 2 (SPS) receiver which is coupled to a communication transceiver, said method
3 comprising:

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determining a channel for communication;
determining a parameter of the said SPS resource;
The method of claim 1, wherein the parameter is determined by monitoring the power control of the receiver over a communication channel;
The method of claim 1, wherein the parameter is determined by monitoring power control of the receiver over said communication channel;
The method of claim 1, wherein the parameter is determined by monitoring power control of the receiver.

1 23. The method of claim 21 wherein said change is a power level determined by
2 monitoring power control commands provided to a power control transmitter circuitry
3 of said communication transceiver by controlling elements of said communication
4 transceiver.

25. A mobile communication system comprising:
a satellite positioning system (SPS) receiver which receives and processes
SPS signals from SPS satellites;
a communication transceiver which receives and transmits a communication
signal;

6 a communication signal measurement (CSM) unit coupled to said
7 communication transceiver and coupled to said SPS receiver, said
8 CSM unit determining a change in said communication signal which
9 specifies a manner for processing said SPS signals.

1 26. The system of claim 25 wherein said change is a change in a power level
2 determined by monitoring power control commands received by the communication
3 transceiver over a communication link.

1 27. The system of claim 25 wherein said change is a power level determined by
2 monitoring power control commands provided to a power control transmitter circuitry
3 of said communication transceiver by controlling elements of said communication
4 transceiver.

1 28. The method of claim 26 wherein said power control commands are received
2 from a basestation in response to signals received by said basestation from said
3 communication transceiver.

1 29. A method as in claim 21 wherein said communication signal is a cellular signal
2 transmitted from a wireless cell site.

1 30. A method as in claim 29 wherein said cellular signal uses at least one of (a) a
2 code-division multiple access (CDMA) technique to distinguish between different

1 36. A method as in claim 35 wherein said parameter is used in determining said
2 pseudorange, and said change is a fading of said signal level.

41. A mobile communication system as in claim 40 wherein when said motion information specifies a first velocity, said search range is a first range, and when said motion information specifies a second velocity, said search range is a second range.

1 42. A mobile communication system as in claim 41 wherein said first velocity is
2 less than said second velocity and said first range is smaller in frequency than said
3 second range.

1 43. A mobile communication system as in claim 39 wherein said SPS receiver
2 determines at least one pseudorange to at least one SPS satellite in view of said SPS
3 receiver.

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